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MINERAL INDUSTRY SURVEYS

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TIN IN MARCH 1997

Domestic consumption of primary tin in March was about the same as in the preceding month and in March 1996.

The Platt's Metals Week composite price for tin was \$3.96 per pound; the same as in February and 5% lower than in March 1996.

A new effort to end the 6-month strike at Wheeling-Pittsburgh Steel Corp., Wheeling, WV, was spurred by Senator Jay Rockefeller (WV), who suggested that both parties remain at the bargaining table until an agreement is reached. Wheeling-Pittsburgh is a tinplate producer and an important tin consumer (Metal Bulletin 1997b).

In Pittsburgh, PA, the Steel Recycling Institute announced that the steel can recycling rate for 1996 was 58%, an increase from 56% in 1995. The recycling rate is a comparison of the total weight of scrap steel cans recovered compared to the total weight of steel cans produced domestically. More than 1.6 million metric tons of scrap tin cans were recycled by the estimated 200 million Americans who have access to steel can recycling collection from curbside, drop-off, and buy-back programs. In 1996, steel mills that operate electric arc furnaces, often called mini-mills, directly consumed a record 522,000 tons of scrap cans, or 32% of the total generated. Integrated steel mills, which generally use basic oxygen furnaces and make the tinplate feedstock for tin cans, consumed 424,000 tons of scrap cans. Detinners processed 136,000 tons of scrap cans, and iron foundries used 42,000 tons of scrap cans. The export market absorbed 56,000 tons of used steel cans. Other uses and depositions accounted for 460,000 tons (Container Recycling Report, 1997).

AMG Resources Corp. announced that it is upgrading its can detinning plants at Gary, IN, and Pittsburgh, PA, in order to better handle steel cans. At each plant, a 6,000-ton-per-month machine has been installed that debales cans, tumbles the load to reduce contaminants, shreds the metal, and further separates the steel from non-metallic materials. The firm plans to install

a similar unit at its Baltimore, MD, detinning plant (Container Recycling Report, 1997).

Officials at South Crofty, the United Kingdom's only remaining tin mine, announced that they had reduced operating costs in 1996 by 12%. They also announced that South Crofty had completed its mine development program, which started in 1994 when South Crofty Holdings Corp., based in Canada, took ownership of the mine. It was expected that mine production in 1997 would reach 200,000 metric tons of ore, at an average grade of 1.5% tin, and a mill recovery rate approaching 90%. Demonstrated reserves were claimed to be 833,000 tons (Metal Bulletin, 1997a).

In Canada, it was reported that a feasibility study at ADEX Mining Inc's., Mount Pleasant, New Brunswick, tin development indicates that resources at the site could total 3.6 million tons of ore grading 0.8% tin and 107 parts per million indium. ADEX estimated that resources could rise to about 8 million tons, a level that could be sufficient for an 8- to 10-year mine life (Platt's Metals Week, 1997).

In Germany, the tinplate production joint venture, Rasselstein Hoesche GmbH, reported output rising from 1.1 million tons in 1995 to 1.2 million tons in 1996. Rasselstein was formed from the merger of Thyssen Stahl AG (Duisburgh, Germany) with a 75% interest, and Krupp Hoesch Stahl AG (Dortmund, Germany) with a 25% interest. Rasselstein claims to hold 20% of the European market for tinplate and to be the world's largest exporter of tinplate, exporting 400,000 tons from Europe in 1996 (American Metal Market, 1997b).

In Beerse, Belgium, Metallo-Chimique announced that it was raising production of London Metal Exchange (LME)-grade tin at its Beerse plant to 9,000 tons annually in 1997, from 6,000 tons in 1996. The firm, which also has U.S. scrap operations, has long been an important secondary copper, lead, and tin producer. Its secondary tin production has been mostly a byproduct of copper scrap processing, but now increasingly

comes from tin scrap (Metal Bulletin, 1997c).

In London, England, the LME announced that it had approved as “good delivery” the “Koba” brand of tin produced by P.T. Koba Tin of Indonesia (American Metal Market, 1997a).

In Japan, it was reported that Nihon Almit Corp. had developed new low-lead and lead-free lines of solders. Almit KS1 had an assay composition of 96.50% tin, 1.50% silver, 2.00% bismuth; Almit KS2 had 91.50% tin, 5% lead, 1.48% silver, and 2.00% bismuth. Nihon reported both solders to have acceptable melting points, slightly higher than the traditional 60% tin - 40% lead solder (ITRA Market Monitor, 1997).

Update

On May 16, 1997, the Platt’s Metals Week composite price for tin was \$3.88 per pound.

References Cited

- American Metal Market, 1997a, Around the metal market: American Metal Market, v. 105, no. 61, March 31, p. 16.
- 1997b, German tinplate venture output up: American Metal Market, v. 105, no. 55, March 20, p. 5.
- Container Recycling Report, 1997, Steel can recycling: Container Recycling Report, v. 8, no. 4, April, p. 4.
- ITRA Market Monitor, 1997, Solders: ITRA Market Monitor, no. 1, March, p. 3.
- Metal Bulletin, 1997a, Crofty completes investment programme at UK mine: Metal Bulletin, no. 8171, April 21, p. 5.
- 1997b, New talks at Wheel-Pitt: Metal Bulletin, no. 8169, April 14, p. 20.
- 1997c, Metallo-Chimique to raise production: Metal Bulletin, no. 8160, March 10, p. 13.
- Platt’s Metals Week, 1997, Canada tin project ups resources: Platt’s Metals Week, v. 68, no. 12, March 24, p. 8.

TABLE 1
SALIENT TIN STATISTICS 1/

(Metric tons, unless otherwise noted)

	1996 p/	1997		
		February	March	January-March
Production, secondary e/ 2/	10,800	900	900	2,700
Consumption:				
Primary	37,700 r/	3,110 r/	3,140	9,560
Secondary	11,100 r/	915 r/	883	2,690
Imports for consumption, metal	33,200	3,460	NA	NA
Exports, metal	2,790	399	NA	NA
Stocks at end of period	4,670	5,610 r/	5,590	XX
Prices (average cents per pound): 3/				
Metals Week composite 4/	412.43	395.64	395.64	XX
Metals Week New York dealer	288.10	274.50	274.94	XX
London, standard grade, cash	279.00	266.00	267.00	XX
Kuala Lumpur	275.19	263.54	262.57	XX

e/ Estimated. p/ Preliminary. r/ Revised. NA Not available. XX Not applicable.

1/ Data are rounded to three significant digits, except prices.

2/ Comprises tin recovered from alloys and tinplate. The detinning of tinplate (coated steel) yields only a small part of the total.

3/ From Platt's Metals Week.

4/ The Metals Week composite price is a calculated formula, not a market price, that includes fixed charges, finance charges, and a risk factor. It normally is substantially higher than other tin prices.

TABLE 2
METALS WEEK COMPOSITE PRICE 1/

(Cents per pound)

Period	High	Low	Average
1996 (annual)	436.25	388.49	412.43
1996:			
March	427.03	405.03	414.71
April	435.05	422.96	429.61
May	436.25	415.30	426.88
June	418.01	410.83	413.65
July	423.04	408.27	417.03
August	411.84	407.75	409.11
September	413.10	402.69	408.04
October	404.38	396.12	400.25
November	409.57	392.40	401.00
December	405.37	388.49	394.76
1997:			
January	404.19	387.89	396.17
February	403.46	390.40	395.64
March	401.81	389.32	395.64

1/ The Metals Week composite price is a calculated formula, not a market price, that includes fixed charges, finance charges, and a risk factor. It normally is substantially higher than other tin prices.

Source: Platt's Metals Week.

TABLE 3
TINPLATE PRODUCTION AND SHIPMENTS IN THE UNITED STATES 1/

(Metric tons, unless otherwise noted)

Period	Tinplate waste (waste, strips, cobble, etc.) (gross weight)	Tinplate (all forms)			Shipments 2/
		Gross weight	Tin content	Tin per metric ton of plate (kilograms)	
1996 p/	181,000	1,550,000	9,620	6.2	2,750,000
1997:					
January	15,900	140,000 r/	853 r/	6.1 r/	204,000
February	13,600	138,000	775	5.6	183,000
March	12,700	144,000	676	4.7	NA

p/ Preliminary. r/ Revised. NA Not available.

1/ Data are rounded to three significant digits.

2/ Shipments data from American Iron and Steel Institute monthly publication AIS10.

TABLE 4
U.S. TIN IMPORTS FOR CONSUMPTION AND EXPORTS 1/

(Metric tons)

Country or product	1996 p/	1997		January- February
		January	February	
Imports:				
Metal (unwrought tin):				
Bolivia	6,290	80	606	686
Brazil	9,460	740	1,200	1,940
Chile	407	261	--	261
China	2,760	356	243	598
India	898	240	258	498
Indonesia	7,550	604	590	1,190
Malaysia	965	400	40	440
Peru	481	679	363	1,040
Russia	435	--	100	100
Other	922	93	57	152
Total	30,200	3,450	3,460	6,910
Other (gross weight):				
Alloys	11,800	891	734	1,630
Bars and rods	695	70	52	122
Foil, tubes, and pipes	(2/)	--	(2/)	(2/)
Plates, sheets, and strip	641	18	10	29
Waste and scrap	6,740	453	203	655
Miscellaneous	1,360	96	103	200
Total	21,300	1,530	1,100	2,630
Exports (metal)	4,780	411	399	809

p/ Preliminary.

1/ Data are rounded to three significant digits; may not add to totals shown.

2/ Less than 1/2 unit.

Source: Bureau of the Census.

TABLE 5
CONSUMPTION OF TIN IN THE UNITED STATES, BY FINISHED PRODUCT 1/

(Metric tons of contained tin)

Product	1997							January- March total
	1996 p/	February			March			
		Primary	Secondary	Total	Primary	Secondary	Total	
Alloys (miscellaneous) 2/	418 r/	32	--	32	32	--	32	103
Babbitt	201 r/	19 r/	W	19 r/	20	W	20	56
Bar tin and anodes	100 r/	W	--	W	W	--	W	W
Bronze and brass	1,890 r/	61	101	162	68	96	164	470
Chemicals	6,950 r/	631 r/	W	631 r/	731	W	731	1,990
Collapsible tubes and foil	255 r/	16 r/	W	16 r/	48	W	48	84
Solder	8,920 r/	454 r/	223 r/	677 r/	469	W	469	1,530
Tinning	1,640 r/	135	--	135	137	--	137	405
Tinplate 3/	9,620 r/	775	W	775	676	W	676	2,310
Tin powder	573 r/	48	--	48	W	W	W	144
White metal 4/	W	W	--	W	W	W	W	W
Other	1,370 r/	36	91 r/	127 r/	61	287	348	974
Total reported	31,900 r/	2,210 r/	415 r/	2,620 r/	2,240	383	2,630	8,060
Estimated undistributed consumption 5/	16,800	900	500	1,400	900	500	1,400	4,200
Total	48,800 r/	3,110 r/	915 r/	4,020 r/	3,140	883	4,030	12,300

p/ Preliminary. r/ Revised. W Withheld to avoid disclosing company proprietary data; included with "Other."

1/ Data are rounded to three significant digits; may not add to totals shown.

2/ Includesterne metal.

3/ Includes secondary pig tin and tin acquired in chemicals.

4/ Includes pewter, britannia metal, and jewelers' metal.

5/ Estimated consumption of plants reporting on an annual basis.

TABLE 6
DEFENSE LOGISTICS AGENCY
TIN STOCKPILE DISPOSALS 1/

(Metric tons)

Period	Monthly disposals 2/
1996:	
March	534
April	5
May	10
June	330
July	1,180
August	1,370
September	2,300
October	--
November	210
December	200
Year total	6,670
1997:	
January	215
February	200
March	115
Total	530

1/ Data are rounded to three significant digits; may not add to totals shown.

2/ These disposals represent only the daily, spot sales program. They do not include the long-term dealer contract sales program.

Source: Defense Logistics Agency.